

PROCEEDINGS OF THE
ROYAL ENTOMOLOGICAL SOCIETY
OF LONDON

SERIES C. JOURNAL OF MEETINGS

VOLUME 20.

No. 9, 1955

ORDINARY MEETING

WEDNESDAY, 7th DECEMBER, 1955, at 5.30 p.m.

AGENDA

1. Confirmation of the Proceedings of the Ordinary Meeting held on 2nd November, 1955.
2. Recommendations of candidates for Fellowship. First reading.
3. Recommendations of candidates for Fellowship. Second reading.
4. Announcement of election of new Fellows.
5. Additions to the Library. [See p. 43.]
6. Nomination of Officers and Council for 1956.
7. Admission of Fellows.
8. Exhibits.

As already announced, the meeting will be devoted to small exhibits of special interest requiring only short explanations.

Brief notes on these exhibits, suitable for publication in these *Proceedings*, should reach the Honorary Secretary by Saturday, 3rd December.

Tea will be served in the Library before the meeting.

NOTICES.

**Tenth International Congress of Entomology,
Montreal, 17th-25th August, 1956.**

The Society is in touch with the Canadian Pacific Railway Company regarding travel arrangements for entomologists attending the above Congress. Any Fellow resident in this country who wishes to receive details is asked to write to the Registrar.

Detailed notices of the Congress itself can be obtained from Secretary of the Congress, Mr. J. A. Downes, Division of Entomology, Science Service Building, Ottawa, Canada.

Time of Ordinary Meetings.

It has been suggested that the present practice of holding the Society's Ordinary Meetings at 5.30 p.m. (preceded by tea at 5.0 p.m.) is not wholly acceptable to Fellows. The Society therefore invites expressions of opinion from Fellows on this point, and particularly as to whether they would favour a return to the pre-war practice of holding meetings at 8.0 p.m.

Extension of the Society's activities to cover all land Arthropods.

Fellows of the Society will remember that in 1954 Council had before them a suggestion that the Society's field of activity might be extended to include all land Arthropods and Fellows were invited to express their views.

Council have now further considered this proposal and it has been decided that the Society is unable at the present time to extend its activities in this direction.

PROCEEDINGS OF THE ORDINARY MEETING HELD ON 2ND NOVEMBER, 1955.

Dr. KENNETH MELLANBY, C.B.E., Vice-President, in the Chair.

Present, 80 Fellows and 21 Visitors.

The minutes of the Ordinary Meeting held on 5th October were confirmed and signed by the Vice-President.

The Vice-President made an announcement regarding the times of Ordinary Meetings. [See p. 40.]

The names of the following candidates for election were read for the first time: Dr. Neville Lawn Birkett, M.B., Ch.B.; Mr. Michael Edwin Glyn Evans, B.Sc.; Mr. Malvern Basil Georgala, M.Sc.; Mr. Arnold Hitchon, B.Sc.; Dr. Richard William Hornabrook, M.R.A.C.P., M.B., Ch.B.; Mr. Ian A. D. Robertson, B.Sc.

For the second time (taken as read): Mr. Victor Ammah-Attoh; Mr. R. Mohammad Zainal Arif; Mr. Onkar Singh Bindra, B.Sc.; Mr. Donald Alfred Chant, M.A.; Dr. Evan Elias Edwards; Mr. Helmut Fritz van Emden, B.Sc.; Mr. Robert Hammond; Miss Christine Maria Felicitas von Hayek; Mr. Manohar Lal Jerath, M.Sc.; Mr. Hirendra Lal Kundu, M.Sc.; Mr. Trevor Lewis, B.Sc.; Dr. Sami Riad Abdel Malek; Mr. Sarveshwar Dayal Mathur; Mr. P. R. Parameswaran Pillai; Mr. Ralph Owen Rye, B.Sc.; Mr. Rajendra Bahadur Singh, M.Sc.; Miss Joan Gwynneth Thomas; Mr. Gerald Vincent Weerawardane; Mr. Walter Wilkinson and Mr. Geoffrey Harvey Wotton Wood.

The Secretary read the names of the following newly elected Fellows of the Society: Dr. Fred Corry Bishopp, B.S., M.S., 8014, Piney Branch Road, Silver Spring, Maryland, U.S.A.; Mr. John Gordon Blower, 50, Erncroft Road, Marple Bridge, Stockport, Cheshire; Mr. Alastair John Michael Carnegie, International Red Locust Control Service, Abercorn, N. Rhodesia; Mr. Donald Henry Colless, 125 I, Eng Neo Avenue, Singapore, 11; Mr. Clive Arthur Edwards, 18, Elliston Road, Bristol; Mr. Gunderico Wladimiro Santos da Veiga Ferreira, P.O. Box 1398, Lourenço Marques, Portuguese East Africa; Mrs. Maria Corinta Ferreira Fontes de Melo Ferreira, P.O. Box 1398, Lourenço Marques, Portuguese East Africa; Professor Dr. Flavio O. da Fonseca, Instituto Butantan, Caixa Postal 65, Sao Paulo, Brazil; Dr. Caryl Parker Haskins, 305, East 43rd Street, New York 17, N.Y., U.S.A.; Mr. William D. Hedgecock, 2, Maple Grove, St. Helens, Lancashire; Mr. James Mather Hoy, M.Sc., Entomological Research Station, P.O. Box 623, Palmerston North, New Zealand; Mr. John Makgill Kelsey, B.Sc., Officer in Charge, Entomological Research Station, Department of Scientific and Industrial Research, Ashburton, New Zealand; Mr. P. Krishna Menon, B.Sc., Plant Quarantine and Fumigation Station, Harbour, Madras, India; Mr. Neville John Myers, B.Sc., Department of Entomology, Rhodes University, Grahamstown, South Africa; Mrs. Eleanor Alice May Prosser, 39, Harlow Oval, Harrogate, Yorkshire; Mr. George Romanus Shidrawi, M.Sc., Ministry of Public Health Malaria Team, Beirut, Lebanon.

Thanks were voted to donors of gifts to the Library since the last meeting.

Mr. D. L. Milne and Mr. B. D. Smith signed the Obligation Book and were admitted Fellows of the Society.

The following papers, accepted for publication in the *Transactions*, were read in title:

"Drosophilidae (Diptera) within the Arctic Circle. I. General Survey," by E. B. Basden.

"The *Anopheles leucosphyrus* group," by D. H. Colless.

"New and little-known species of the Leptocerinae (Trichoptera) from the African mainland (south of the Mediterranean region)," by D. E. Kimmins. [Communicated by Dr. N. E. Hickin.]

"Species hybrids in mosquitoes," by P. F. Mattingly.

Dr. H. E. Hinton commented upon the value of photography by polarised light in studies of skeletal muscles. Two lantern slides were shown: (1) the leg of a trichopterous larva to show the tibial flexor that extends through the femora and originates in the trochanter, and (2) the abdomen of a dipterous larva, *Mycetobia pallipes* Meigen, that demonstrated longitudinal muscles originating in one segment and inserted in another.

Dr. C. G. Johnson gave a talk on the vertical distribution of insects in the air, an abstract of which appeared on pages 33-34.

In the discussion which followed, Mr. J. G. Skellam said that he had seen some of Dr. Johnson's data. While Dr. Johnson's approach was empirical, he himself had examined the data from a different point of view. Mr. Skellam's approach was to see whether some sort of model could be set up as a standard against which observed data could be matched. The simplest model would be

to conceive the insect as a particle suffering vertical displacement due to gravity and a random disturbance due to air movements. This would lead to a simple tapering off with height in an exponential manner. This result would not be represented by a straight line on Dr. Johnson's graphs. All insects were, however, not the same size but, by assuming simple reasonable hypotheses about size and movement, by integration, straight lines similar to those in Dr. Johnson's graph were obtained. A slight complication arose as the model assumed the random displacement to be the same at all heights, whereas on summer days there were cells of convection which coalesce at greater heights. This is a possible explanation of the observation that the lowest point appeared abnormal.

Professor O. W. Richards, having asked about the significance of the particular constants used in the first formula, Dr. Johnson replied that the relative size of n appeared to be correlated with the type of curve to be expected in turbulent and non-turbulent weather. High values of n should be correlated with conditions in stable air. On the other hand, the values k merely determine the scale of the curve.

Dr. R. C. Rainey asked whether Dr. Johnson had determined the upper limit of aphid distribution in relation to the vertical temperature distribution. In large locust swarms the upper limit of the insects corresponded very closely with the upper limit of convection currents.

Dr. Johnson replied that he was unable to operate his traps at a sufficient height to enable him to express an opinion.

Dr. Rainey also remarked on the association between the arrivals of insects in large numbers and cold air fronts. Swarms of locusts moving with warm south and south-west winds appeared often to be grounded by the sharp temperature drop when a cold front was met, although the temperature gradient was steeper after the passage of a cold front and atmospheric conditions were more unstable.

Dr. Johnson observed that his data were based on catches recorded over hourly periods, so that his findings, though not incompatible, were not strictly comparable with Dr. Rainey's.

Dr. F. van Emden gave a talk on the importance of larval characters for taxonomy in insects, an abstract of which appeared on page 34.

A short discussion followed in which Mr. D. Leston remarked that Hemipterists were now using eggs in addition to larvae in taxonomic work. Mr. Hawkins enquired whether it was not a fact that the embryo of the larva was more important than the larva itself.

Dr. van Emden agreed that systematics included all characters of life and structure, and the insect egg was of taxonomic importance, but it must not be overlooked that cuticle is really the skeleton of the insect.

E. B. BRITTON, *Honorary Secretary*.

The next meeting will be held on 18th January, 1956.

ADDITIONS TO THE LIBRARY.

Presented.

Ragge, D. R. *The wing-venation of the Orthoptera Saltatoria. With notes on Dictyopteran wing-venation.* 8vo. London. 1955. [Trustees of the British Museum.]

Dalmat, Herbert T. *The Black flies (Diptera, Simuliidae) of Guatemala and their role as vectors of onchocerciasis.* *Smithson. misc. Coll.* **125** (1). 1955. [Smithsonian Institution.]

Beirne, Bryan P., and others. *Collecting, preparing and preserving insects.* Sm. 8vo. (Canada Dept. Agric. Publ. 932.) 1955. [Dr. B. P. Beirne.]

Contributions à l'étude de la faune entomologique du Ruanda-Urundi. (Mission P. Basilewsky 1953.) Deuxième partie. *Ann. Mus. Congo belge* (Zool.) **8° 40** : 454 pp. 1955. [Musée du Congo Belge, Tervuren.]

Koch, C. *Monograph of the Tenebrionidae of southern Africa. Vol. 1. Tentyriinae, Molurini-Trachynotina: Somaticus Hope.* (Transv. Mus. Mem. **7**.) 8vo. Pretoria. 1955. [Trustees of the Transvaal Museum.]

Purchased.

Roy, D. N., and Brown, A. W. A. *Entomology (medical and veterinary) including insecticides and insect and rat control.* 8vo. Calcutta. 1954.

Coloured illustrations of the insects of Japan. Coleoptera. Edited by the Kinki Coleopterological Society. 8v0. Osaka. 1954. [In Japanese.]

In addition, separates have been presented by Professor J. Lane ; Trustees of the British Museum ; United States Department of Agriculture ; Los Angeles County Museum ; Commonwealth Institute of Entomology ; Dr. A. N. Clements ; Entomological Society of Ontario ; Dr. A. M. Massee ; Dr. V. G. Dethier ; Hong Kong Biological Circle ; Chicago Natural History Museum ; East African Tsetse and Trypanosomiasis Research and Reclamation Organisation ; Virus Research Institute, Entebbe ; Mr. N. D. Riley ; Carnegie Museum, Pittsburgh ; Trustees of the Transvaal Museum, Pretoria ; Dr. J. L. Cloudsley-Thompson.

NOTICES

In addition to the *Transactions and Proceedings* (Series A, B, and C), the following publications are available on application at the Society's rooms:—

THE GENERIC NAMES OF BRITISH INSECTS, WITH CHECK LISTS OF THE SPECIES, prepared by the Committee on Generic Nomenclature of the Royal Entomological Society of London with the assistance of the Department of Entomology of the British Museum (Natural History):—

Part 1. Recommendations relating to the publication of the Committee's Reports										Price	6d.
2.	Rhopalocera	..	..	..	..	..	..	..	..	3s.	6d.
3.	Odonata	..	..	..	..	..	..	..	..	3s.	6d.
4.	Neuroptera	..	..	..	..	..	..	..	..	3s.	6d.
5.	Hymenoptera Aculeata	..	..	..	..	..	..	..	..	15s.	0d.
6.	Coleoptera Carabidae	..	..	..	..	..	..	..	..	10s.	0d.
7.	Coleoptera Hydradephaga	..	..	..	..	..	..	..	..	5s.	0d.
8.	Hemiptera Heteroptera	..	..	..	..	..	..	..	..	39s.	0d.
9.	Coleoptera Staphylinidae	..	..	..	..	..	..	..	..	40s.	0d.

HANDBOOKS FOR THE IDENTIFICATION OF BRITISH INSECTS.

The Society has undertaken the issue of a series of publications intended to provide illustrated Keys to the whole of the British Insect Fauna so far as this is possible.

It is proposed to cover this field in a series of ten volumes, arranged as follows:—

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| <p>I. Part 1. General Introduction.</p> <p>„ 2. Thysanura.</p> <p>„ 3. Protura.</p> <p>„ 4. Collembola.</p> <p>„ 5. Dermaptera and Orthoptera.</p> <p>„ 6. Plecoptera.</p> <p>„ 7. Psocoptera.</p> <p>„ 8. Anoplura.</p> <p>II. Hemiptera.</p> <p>III. Lepidoptera.</p> <p>IV and V. Coleoptera.</p> <p>VI. Hymenoptera: Symphyta and Aculeata.</p> <p>VII. Hymenoptera: Ichneumonidea.</p> <p>VIII. Hymenoptera: Cynipoidea, Chalcidoidea and Serphoidea.</p> <p>IX. Diptera: Nematocera and Brachycera.</p> | <p>Part 9. Ephemeroptera.</p> <p>„ 10. Odonata.</p> <p>„ 11. Thysanoptera.</p> <p>„ 12. Neuroptera.</p> <p>„ 13. Mecoptera.</p> <p>„ 14. Trichoptera.</p> <p>„ 15. Strepsiptera.</p> <p>„ 16. Siphonaptera.</p> <p>X. Diptera: Cyclorrhapha.</p> |
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The following parts are now available:—

- Vol. I, Part 2. Thysanura and Diplura. By M. J. Delany. Price 2s. 6d. plus postage.
- Vol. I, Part 5. Dermaptera and Orthoptera. By W. D. Hincks. Price 3s. 6d. plus postage.
- Vol. I, Part 6. Plecoptera. By D. E. Kimmins. Price 3s. 6d. plus postage.
- Vol. I, Part 9. Ephemeroptera. By D. E. Kimmins. Price 3s. 6d. plus postage.
- Vol. I, Part 10. Odonata. By F. C. Fraser. Price 7s. 6d. plus postage.
- Vol. IV, Part 3. Coleoptera, Hydradephaga. By F. Balfour-Browne. Price 6s. plus postage.
- Vol. IV, Part 8a. Coleoptera: Staphylinidae (part). By C. E. Tottenham. Price 15s. 0d. plus postage.
- Vol. V, Part 7. Coleoptera: Coccinellidae and Sphindidae. By R. D. Pope. Price 2s. 6d. plus postage.
- Vol. V, Part 9. Coleoptera. By F. D. Buck. Price 6s. plus postage.
- Vol. V, Part 12. Coleoptera: Cerambycidae. By E. A. J. Duffy. Price 3s. 6d. plus postage.
- Vol. V, Part 15. Coleoptera, Scolytidae and Platypodidae. By E. A. J. Duffy. Price 3s. 6d. plus postage.
- Vol. VI, Part 2a. Hymenoptera: Symphyta (part). By R. B. Benson. Price 10s. 0d. plus postage.
- Vol. VI, Part 2b. Hymenoptera: Symphyta (contd.). By R. B. Benson. Price 15s. 0d. plus postage.
- Vol. IX, Part 1. Diptera: Introduction and Key to Families. By H. Oldroyd. Price 7s. 6d. plus postage.
- Vol. IX, Part 2. Diptera, Nematocera: Families TIPULIDAE to CHIRONOMIDAE. By R. L. Coe, Paul Freeman and P. F. Mattingly. Price 20s. 0d. plus postage.
- Vol. X, Part 1. Diptera: Syrphidae. By R. L. Coe. Price 17s. 6d. plus postage.
- Vol. X, Part 4a. Diptera, Cyclorrhapha (part). By F. I. van Emden. Price 20s. 0d. plus postage.

Orders for the complete series or for separate parts can be placed with the Registrar at the Society's rooms now, but prices can only be quoted for those parts already issued.

Fellows of the Society may purchase one copy at a discount of 25 per cent.; additional copies at the full published price.

STYLOPS, a Journal of Taxonomic Entomology.

1932-1935. Vols. 1-4 (all issued). Price £2 3s. 0d. each; to Fellows £1 12s. 9d.

HÜBNER: A BIBLIOGRAPHICAL AND SYSTEMATIC ACCOUNT OF THE ENTOMOLOGICAL WORKS OF JACOB HÜBNER AND THE SUPPLEMENTS THERETO. In 2 vols. By Francis Hemming. Price: Vol. 1. 605 pp. £1 15s. 0d.; Vol. 2. 275 pp. 15s. 0d.

THE HISTORY OF THE ENTOMOLOGICAL SOCIETY OF LONDON, 1833-1933. By S. A. Neave, assisted by F. J. Griffin. Price 10s. 6d.

SERIAL PUBLICATIONS IN THE LIBRARY OF THE ROYAL ENTOMOLOGICAL SOCIETY OF LONDON. 1951. Price 5s. 0d.

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